the use of the aspirator will be rapidly renewed. Such bleeding may, the author grants, be the result of bruising and laceration of the vessels which supply the capsule and other ligaments, and probably also of a tearing of cartilage, but as bleeding from such sources is usually derived from the smallest vessels, one would not expect it to be renewed after aspiration. On the other hand, bleeding due to rupture of vessels on bone would persist, and form repeated accumulations, since such vessels cannot readily contract, and their orifices are not so likely to be closed at an early period through thrombosis. This renewal of the bleeding after the use of the aspirator in cases of injury to the knee, is regarded by the author as an important diagnostic indication of fracture, although it can afford no help in the determination of the precise seat of the injury.—*Brit. and For. Med. Chir. Review*, Jan. 1877.

35. *On Excision of the Joint between the Os Calcis and Astragalus.*—Excision of certain bones and joints of the foot for the removal of disease are now well-recognized operations, and the most recent experiences seem to confirm the advisability of such proceedings in suitable cases.

Although the existence of disease originating in and confined to the joint between the os calcis and astragalus has been long recognized by surgeons, no attempt was made to act upon the diseased joint alone, and remove by excision its affected surfaces prior to the operation shortly to be described. Some authors advise (*Edinburgh Med. Journ.*, Jan. 1877) that, in disease of this joint, either the entire os calcis or astragalus be excised, and the remaining diseased surface gouged away. Others, as the late Mr. Syme, advise, and have largely practised, amputation at the ankle for this disease.

The apparent difficulty of obtaining free access to this joint, and of removing its surfaces, is, no doubt, the reason which has hitherto prevented surgeons performing re-section of it; but having recently successfully practised a thoroughly efficient method of excising this articulation, Mr. THOMAS ANNANDALE ventures to describe (*Edinburgh Med. Journ.*, Jan. 1877) this method.

The importance of recognizing and treating early disease originating in this articulation, especially after suppuration has taken place, must be acknowledged, for, owing to the situation and connections of this joint, there must always be a peculiar risk of the gradual implication of the surrounding bones and joints.

Having carefully studied the anatomical relations of the joint under consideration, I found that its entire extent could be best exposed without injury to surrounding structures in the following way: The foot having been placed in the extended position, and resting on its inner aspect, an incision, commencing about an inch above the tip of the external malleolus, and carried along its posterior border in a curved direction to the calcaneo-cuboid joint, thoroughly exposes the posterior and external portion of the joint, when the peroneal tendons have been drawn outwards, and some ligamentous bands divided. This incision will be found to run along the inner border of the tendon of the peroneus brevis muscle. The anterior and internal portion of the joint can then be exposed by placing the foot still in the extended position on its outer aspect, and making an incision from the tip of the internal malleolus along the course of the tendon of the tibialis posticus, as far as the prominence of the scaphoid bone, drawing forwards this tendon, and carefully drawing backwards the other tendons and the posterior tibial vessels and nerve. By making the first incisions through the skin and cellular tissue only, and so ascertaining the exact position of the tendons likely to be injured, then cutting down through the periosteum to the bone, and with a periosteal scraper separating to a sufficient extent the periosteum, together with all the other superficial tissues, there is little risk of injuring any of the tendons or other important structures.

Both aspects of the joint having in this way been exposed, it will be found that by means of the chisel and mallet the articular surfaces can be easily and accurately removed, the posterior portion being removed through the external incision, and the anterior portion through the internal one. Should there be any disease in the hollow or fossa between the two articular surfaces, it can be readily reached and removed with the chisel or gouge through either of the incisions.

I have now to relate the following case, which is not only a proof of the possibility and success of this operation, but is also an illustrative example of the form of disease in which I think that excision may, instead of amputation or removal of an entire os calcis or astragalus, be employed.

Catharine K., age 18, was admitted into my wards, in the Infirmary, on the 20th of March of this year. Her history was, that about two years previous to her admission she severely twisted her right foot. From that time she suffered more or less pain in the region of the joint between the os calcis and astragalus, with swelling of the foot below the ankle. She was treated by rest and the application of warm fomentations, tincture of iodine, and other remedies, but with only very temporary benefit. As her symptoms were becoming steadily worse, she requested to be admitted into the Infirmary.

On admission the symptoms of disease in the calcaneo-astragaloid articulation were well marked. These symptoms were swelling on the lateral and posterior aspects of the foot immediately below the malleoli, tenderness on pressure, and pain when the foot was firmly grasped, and moved laterally and rotated. The ankle-joint was healthy, and the anterior tarsus and portion of the foot were free of disease. The first treatment consisted of complete rest, and the application of soothing means to relieve the pain. Shortly after this a small abscess formed on the external aspect of the joint, and it was opened and the wound dressed with antiseptic precautions. The wound was healed in about a month, and the foot, ankle, and leg were then confined in pasteboard splints and a starch bandage. With this appliance she was sent to the Convalescent Hospital for six weeks, but on her return little change had taken place in the symptoms. The splints were reapplied, and she went home, but returned again on the 20th of July, as the disease was no better, but rather worse. The swelling and pain were now more marked, and in addition there was a feeling of deep fluctuation over the outer aspect of the joint. On account of this aggravation of the disease she was re-admitted, and on the 29th of August I exposed the lateral aspects of the joint in the way I have described, and finding suppuration with caries of its articular surfaces, more particularly of those of its posterior portion, I removed with the chisel the entire articular surfaces of the joint—that is to say, the articular surfaces on the upper aspect of the os calcis, and the corresponding surfaces on the under aspect of the astragalus. The interosseous ligament was softened and in part destroyed. After the diseased surfaces had been removed, a drainage-tube was passed completely through the joint, and its open ends allowed to project at either wound. The operation was performed with antiseptic precautions, and the usual antiseptic dressing was afterwards applied and continued until the 10th of October, when the boracic-acid lotion was substituted for it. The patient's progress after the operation was excellent, and the wounds gradually contracted, and were soundly healed on the 22d of November.

At this date the appearance of the foot was natural, and the movements at the ankle-joint were free and perfect. The patient could bear good weight upon the foot, and it promised to be in time quite strong and useful.

---

36. *Neuroma of the Median Nerve; Excision and Suture of Nerve.*—At the meeting of the Surgical Society of Paris, on November 8, M. NOTTA brought forward this case. A tumour of the size of a hazel-nut existed on the anterior surface of the forearm, presenting all the objective and subjective symptoms of a neuroma of the median nerve. This was excised, and the ends of the nerve (retracted about three centimetres) were brought into contact by a metallic suture. After the operation, anæsthesia was proved to exist in the parts supplied by the median nerve. Formication was soon felt. On the thirteenth day sensibility reappeared in the ring finger; on the sixteenth on the thenar eminence; elsewhere the return was more gradual; eight months after the operation, the patient could feel as well with one hand as with the other At the same time, peripheral ulcerations on the index and middle finger had healed. Microscopic examination showed that the tumour was a fibro-sarcoma